



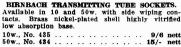






DECEMBER, 1938

# Birnbach



#### BIRNBACH TRANSMITTER LEAD-IN INSITIATOR.

23in. high with 10in. Rod, complete with bushings and cork washers to permit watertight seal both indoors and outdoors.

BIRNBACH GRAMOPHONE NEEDLE CHUCK TYPE TEST PRODS.

Complete with kinkless wire and phone tip ends. overall length 50 inches.



BIRNBACH STANDOFF INSULATORS.

Designed to the same high standard that characterises the extensive line of Birnbach wet process Insulators.

4450, 4½in, high . 6/-4275, 2½in, high . 4/-766 Beehive Type, 2/-4450, Jack Type, 12/6 4275, Jack Type . 10/-866, 1 5-16in. high 1/9 966, 1in. high . 1/3 405, §in. high . 1/-866, Jack Type . . 2/-966J. Jack Type . 1/6

BIRNBACH CERAMIC CONE STANDOFF INSULATORS.

For easy mounting of Condensers, Coils, Tube Sockets and High Frequency apparatus by virtue of having a threaded hole and screw in the base. 430, §in. high . . 1/8 431, 1in. high . . 2/-432, 1½in. high . . 2/6 433, 2¾in. high . . 8/6

BIRNBACH FEED THRU INSULATORS. 4234, 22in. high . 7/6 4234J, Jack Type, 12/6 4125, 1½in. high . 3/-478, ½in. high . 2/6 458, ¾in. high . 1/9 4125J Jack Type . 3/6

478J Jack Type . . 8/-BIRNBACH ALUMINIUM 5 METER 4 SECTION DOUBLET ANTENNA.

Each section adjustable 26in. to 42in. rotated to any degree of Polarization. Impedance at centre 72 ohms matched by EO1 cable. Aluminium tubing permits outdoor mounting and special lock bushings hold each section in place. 41in.

Insulator provides mounting for two 1-wave antennas. Write for specification of special EO1 Cable also available. No. 159 at £2 nett. EO1 Cable, price on application.

Send for Illustrated Folder of Birnbach.

# INSULATORS





Australasian Engineering Equipt. 370 LITTLE COLLINS STREET - - - - MELBOURNE

#### AMATEUR RADIO

Published by the Wireless Institute of Aust., Victorian Division.

Vol. 6 No. 12

1st DECEMBER, 1938

#### INDEX

Editorial	-	Federal and Victorian Q.S.L. Bureau	14
Battery Power and Crystal Con- trol	5	The Amateur and Defence  Divisional Notes—  N.S.W.	
Reminiscences of 7AH	7	Victoria	
Contest Section	10	Queensland	
28 and 56 M.C. Notes	12	South Australia	
VK3MR's DX Notes	13	Tasmania	26

#### Divisional Addresses:-

FEDERAL HEADQUARTERS BOX 2127L, G.P.O., SYDNEY
NEW SOUTH WALES BOX 1734JJ, G.P.O., SYDNEY
VICTORIA BOX 2611W, G.P.O., MELBOURNE
QUEENSLAND
WEST AUSTRALIA—
ROOMS 2 & 3, MELBA CHAMBERS, Cor. HAY and MILLIGAN
STREETS, PERTH.
SOUTH AUSTRALIA BOX 284D, G.P.O., ADELAIDE
TASMANIA BOX 547E, G.P.O., HOBART

#### Magazine Committee:-

Editor—W. R. GRONOW (VK3WG).

Technical Editor—R. H. CUNNINGHAM (VK3ML); Notes—C. SERLE (VK3RX);

Compilation—V. E. MARSHALL (VK3UK);

Secretary—T POWERS (VK3PS)

All Communications and MSS. should be forwarded to the Editor, "Amateur Radio," BOX 2611W, G.P.O., MELBOURNE.

Subscription to "Amateur Radio" is 6/- per Annum (Post Free), paid in advance.

Should you not receive your copy of "Amateur Radio," notify your Divisional Secretary at once.

Advertising and Publishing Office: Address Publicity Manager, "Amateur Radie,"
Whitehorse Road, Box Hill, E.11. 'Phone: WX 2429.

NOTE.—ADVERTISERS' CHANGE OF COPY MUST BE IN HAND NOT LATER
THAN THE 20th OF THE MONTH PRECEDING PUBLICATION.

Submit Your Instrument Problems to us



# SIEMENS ELLIOTT INSTRUMENTS

For Every Requirement

#### SIEMENS (Australia) Pty. Ltd.

SYDNEY

MELBOURNE NEWCASTLE

BRISBANE

ADFI AIDF

H. G. Little & Co. Perth: W. & G. Genders Pty. Ltd. Tasmania

ents for THE ENGLISH ELECTRIC CO. LTD., LONDON.



#### EDITORIAL

The following extract from the Editorial of "The Wireless World" England is the nearest thing to a revolution which to our knowledge has ever occurred in England:-

"We do not have to turn the calendar back very far to be able to appreciate how important it is to the country that there should be available in times of emergency a large body of skilled wireless operators. We know that a skilled operator cannot be created at short notice. Not in a month, six months. or even a year can a high standard of proficiency be attained.

"Surely the time has come when the Post Office should remove every obstacle and encourage nossible ownership and operation of amateur transmitters as widely as possible.

"In order to increase the popularity of amateur transmitting as a hobby, applicants for licences should be freed from the obligation of providing evidence as to proposed ex-periments. We would like to see, too, the removal of some of the present ill-defined restrictions as to the nature of the communications in which the amateur may indulge. At present these restrictions debar the amateur from communicating anything beyond the discussion of the nature of his experiments or purely personal matters. We believe that, without any damage to the mono-poly of the Post Office, concessions might be given, provided that it is clearly understood that no remuneration for transmitting messages must pass and that nothing in the nature of commercial intelligence should be put over.

"The Post Office should concede that the desire to become a proficient wireless operator is sufficient justification for the granting of a transmitting licence. BREERERERERERERERERERERERER

Whilst we do not agree with the sentiments expressed regarding the suggested issue of licences "to those who desire to become a proficient operator," the paragraph is of interest, as it illustrates the trend of thought in England today. It is apparent that "The Wireless World" is aware of the value of Amateur operators in times of National emergency and desires to see them encouraged and assisted to improve their efficiency as a national asset.

We must bring up the question of general contributions to our mag. once again. The plain facts of the case are that technical articles, in particular, have been few and far between of late. Must we remind readers that the existence of "Amateur Radio" depends not only upon financial support, but upon the cooperation given by our contributors and readers to make the pages of general interest. In the past "Amateur Radio" has printed technical material of a high standard and we regret having to make a public appeal for technical and general general articles. "Even the blokes that never intended to write one have stopped promising." So you can see how difficult things are in this regard.

As it is only three months to the Federal Convention a reminder on the subject of agenda items is timely. A W.I.A. member who has a matter of Federal nature he would like discussed, should get in touch with a councillor of his Division at once.

The members of the Editorial Committee desire to extend to all their best wishes for a Merry Christmas and Happy New Year.

Editor.

#### A Static Type Velocity Microphone

(By 31H and 3HX)

There has been a considerable amount of talk and a number of articles have appeared in radio papers in connection with this type of microphone.

The writers' attention to the mike was first drawn by ZL hams, who were using a home constructed job. A delightfully vague article in QST (February, 1937) shed some light on the action and operation of the mike.

Being interested in this type of experimentation, the writers set to to find out the whys and wherefores, the result of which is contained in this article, which may or may not interest somebody.

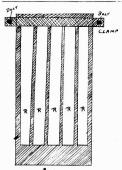
At the time of starting the construction practically no dope was known except for the QST article, which was merely an article telling what the mike was and how it worked.

According to QST, "the mike consists of a number of ribbons loosely laid across a perforated and totally insulated and conducting back plate in such a manner that certain parts of each ribbon are free to move. A voltage difference is maintained between the ribbons and the back plate by means of a D.C. supply. When the ribbons move they alter the capacity between themselves and the back plate, varying the charging current through the resistor R1 and causing a voltage drop across it which is proportional to their movement."

"The static type is a true velocity microphone, having the typical characteristics of high directivity and uniform frequency response, the output level is in the vicinity of -45db."

From experience practically any conducting material will do for the back plate. Zinc-tin alloy, aluminium, lead were the metals tried here, and no difference was noticed.

The back plate was drilled closely with 1/16in. or 1/8in. holes, and then given several coats of insulating material.



BACK PLATE

Here is the most important part on which rests the whole success, or not, of the mike, because if there is the slightest fault in the insulation, trouble begins.

Several types of insulation were tried; shellac was the first, but was not successful. Success was obtained with dissolving celluloid in acetone and carefully painting the mixture several coats on the side on which the ribbons would hang. The same material and amyl-acetate is another successful insulator. Mica was also tried and proved successful. The mica was glued to the plate, and the holes carefully pierced. A note of warning here; in all cases allow the insulating material to dry over-night.

#### amateur Radio

The ribbons proved to be a simple matter. Several kinds of tinfoll were tried, and the best appeared to be the wrappig from Nestle's chocolate. A piece of foil slightly smaller than the plate was cut out, and strings 1/8in. wide were cut out, leaving a number of ribbons \$\frac{1}{2}\text{in}\$.

The method of assembling the unit proved interesting, and also the source of plenty of trouble. The only successful method proved to be that as shown in the diagram, and that was clamping. A plece of oiled silk was used under the ribbons at the top to prevent the ribbons being forced into the insulation.

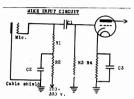
The clamp was simply a piece of brass on one side with a hole for a bolt at each end, a corresponding piece of bakelite was used for the other side.

The ribbons are allowed to hang. Shielding of the unit is essential, leaving, of course, both sides open. Good quality shielded cable should be used, and it is strongly recommended that the input filter and coupler be built in a small shielded can, as otherwise considerable hum will be induced . If precautions are taken no hum will be experienced. The po larizing voltage for the unit can be taken direct from the output of the power supply being used for the Of course, the speech equipment. higher the voltage put on the mike the greater the output will be, but it must be remembered that the insuwill only stand a certain lation The highest voltage used amount. here was about 275 volts.

After the construction of the unit, that it is being tested, it is found to have crackles and various funny noises, the constructor can be certain that his insulation is poor, and the only remedy is to re-insulate the plate.

In use the mike should be placed 15-18 inches away from the speaker's mouth, and if possible never spoken at too close, as this will disturb the ribbons too much, and, further, will increase the low frequency response.

As far as the tests have gone here the frequency response is excellent, and background noise nil, as should be expected. As one can see, the cost of this microphone, constructed at home, is practically nil, and from the results obtained well worth the trouble.



C1. .006-.02 coupling condenser. C2. .5 filter condenser.

C2. .5 inter condenser.
C3. Usual cathode by-pass condenser

R1. 5-10 meg. input coupling condenser.

R2. 5-10 meg. polarizing voltage filter resistor.

R3. 1-5 meg. grid coupling resistor.

R4. Usual cathode bias resistor. M. Microphone.

The microphones (several) here are still in the experimental stages, as various kinds of insulation, etc., are being tried.

#### Battery Power and Crystal Control

(By VK3XB.)

Contacts over the air reveal the fact that there are now numerous country amateurs using battery or vibrator powered transmitters, and this article will deal with an efficient three band transmitter suited to these supplies.

Some men are using 6 volt heater tubes. To my mind, these are disadvantageous. The heaters must be on all the time the station is in operation, and if two tubes are used, this means at least 3.6 watts of filament consumption continuously. Against this, we have 2 volt tubes whose filaments may be switched off

#### Timateun Radio

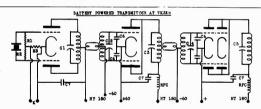
at the conclusion of each "over," and, even if four of them are used, they have a filament consumption of only 1½ watts, and this is only when transmitting.

The transmitter about to be described uses 4 type 19's or KDDI tubes, with 2 battery power supplies of 180 volts each, but a vibrator may be substituted if desired. However, I find that where one is isolated, without regular means of recharging accumulators, the dry battery supply is best, if one wants to be on the air regularly.

The following lay-out has been in use at VK3XB for the last twelve months, and with an average of seven contacts per day over that time, the dry batteries go five months before their voltage becomes too low to be usable. It will be seen that the circuit utilises a single 19 as a push push doubler followed by a pair

in push push for 20 metre operation. One tube could have been used in this stage, as in the 40 metre stage, but the drive is sufficient to warrant the higher power available with two tubes. 300 volts could safely be appled to their plates in the set up nown. Output on all bands is high, and there is ample drive available to obta n excellent plate current resonance dips. The oscillator is keved by the blocked grid method. Coupling to the antenna is by link to the terminating coil of Zepp feeders. Tuning of the transmitter is carried out in the customary manner, using reduced voltages for the initial adjustments. Metres in plate and grid circuits are an adjunct. Single turn i.nk coupling is used throughout.

Coils for the 7,000 k.c. and 14,000 k.c. bands are wound on 2½ inch formers. Condensers C6 are very necessary to prevent self oscillation in the doubler circuits.



Coll. condenser and resistor data are:—Cl. C2. C3. C4. Eddystone 40 mmf; C5. Eddystone 25mmf; C6. 0.0005; C7. .005; L1. L2. 80 turns 22g DSC on 14in. former; L3, L4. 12 turns of 18g on 2½ in. dia. former, pace wound diam. of wire; L5, 6 turns of 18g on 2½ in. dia. former, space wound diam. of wire; L5, 6 turns of 18g on 2½ in. dia. former, space wound diam. of wire; R1, R2, space wound diam. of wire; R1, R2,

50.000 ohms; R3, 250,000 ohms; RFC, 1.25 MH R.F. chokes, Eddystone No. 1010.

Typical operating conditions:— Osc., Ed. 180 (max.); Ip 7m/a; IG 1 m/a. 40 mx doubler, Ep 180-244; Ip (at 180v.) 25 m/a; Ig, 4m/a 20 metres doubler; Ep 180-300; Ip (at 180) 30 m/a; Ig 4 m/a.

## "More Watts Per Dollar" TAYLOR TRANSMITTING TUBES

Sole Queensland Distributors

BUSH & CO Radio Engineers = 505-7 Queen Street, Petrie's Bight, Brisbane

#### Reminiscences of 7AH

A visit paid to Beach Road, Sandy Bay, some three miles from Hobart, was rewarded with a most interesting morning spent with Tasmania's "Grand Old Man of Radio"—"Pop" to the gang.

VK7AH--Mr. F. W. Medhurst although now 71 years of age, would surprise many much younger than himself. Born in Chobham, Surrey, England, in 1887, educated at Nelson College, Lea, Kent, and at Surrey County School, Cranleigh, then at Electrical Engineering School, London Bridge.

At fourteen years of age he entered the Chobham Post Office as telegraphist and general postal assistant; this establishment included printing works, chemist and druggist and stationery business, the whole of which was conducted by his father.

Here he spent eight years, during which time he spent much of his leisure hours with the Telegraph Battalion, Royal Engineers, being close friends with the officers and N.C.O.s, there gaining a lot of his early experience. In addition to this he had two years with the Second Royal West Surrey Regiment Volunteer Battery Signallers.

At the end of this time he left England for Australia and arriving in Melbourne in 1889 he joined the temporary staff at the G.P.O. and later on at Flinders street and Prince Bridge railway stations as operator and telegraphist, where he spent his first two years in Australia, coming to 'Tasmania in March, 1891.

Here he joined the Telegraph Department of the P.M.G.'s Department ment as operator and the same year transferred to the Electrical Fitting Staff of the department for telephone and telegraph work.

During 1900-1901 he carried out experiments with Mr. Hallam, engineer for the department in W/T,

and in 1901 as assistant to Mr. Hallam conducted successful experiments in contacting and maintaining telegraphic communication with the H.M.S. St. George, which, with H.M.S. Juno, accompanied the Ophir in which the Duke of York visited Tasmania. The land station which they constructed personally was situated at the Long Beach Light, known as "Blinking Billy" on One Tree Point. then also a defence batter

Operating was continuous and was very highly commended by the vessel's officers concerned. The equipment used constituted 90 feet of scaffold poles lashed together from



which a vertical aerial was supported. This was end fed and used a plate immersed in the river as earth. 12 in. and 14 in. spark coils were used alternately as transmitters having an adjustable brass ball spark gap and tuned with a tapped inductance. Power was derived from Plante Accumulators, communication being essentially SPARK and very broad, hi!

#### Amateur Radio

Receiving equipment constituted two coherer detectors consisting of nickel and iron filings in a glass tube with two silver contact electrodes and decohered by an electric bell used as a tapper in one case and by being mounted on top of a sounder relay in the other, duplication of the coherer was essential as often they became inactive in a very short time due to oxidisation and a change of filings had to be made repeatedly. The sounder relay previously mentioned operated a Morse Recorder (Siemens).

The coherers were tested for activity by using a spark gas lighter, a miniature Whimshurst machine which flashed a spark between contacts and acting as a small transmitter, was held close to the receiver aerial, an active coherer would register the flash. A photograph of the equipment Command of Signallers in Tasmania, and held this office till he reached the retiring age after the World War.

In 1912 the firm of Medhurst & Sons. Radio and General Electrical. came into being and here he has continued taking an active part in the business until the present day. When originated, the firm specialised in radio. Among his earlier business career he conducted the installation of the first electric lighting equipment in Hobart. He is still very active and takes a delight in going back through the years relating early experiences and comparing them with the present day. He talk of the first Edison Talking Machine and electric lamp, early experiments with radio and the equipment then (not) available, how many ingenious ideas were thought out and how they were



Snapped at a Recent VK7 Field Day.

made to work, and a variety of other was produced while this description was being written and is a treasured possession of 7AH.

The set up was made in a low roofed room or perhaps cellar would be better, normally used as an oil store room and when the visitors expressed the desire to visit the "so wonderful" land station great concern was felt by the local officials about making the place presentable.

Pop's military career commenced in England, was continued in Tasmania, spending two years with Submarine Mining Co. of Engineers, he transferred to Mounted Infantry and after eight years became Officer in subjects dear to those who spent so much time and energy delving into possibilities which have grown to be present day realities.

As one might observe from the foregoing, radio has been foremost with him sleeping and waking, and he now expresses regret at not being able to be still active on the popular bands, in fact, during the conversation he suggested he was considering a bit of 5 meter work and if he continues to remain in his present health I would not be surprised any time to hear him at work—the fiesh is still willing, ay Pop!

He reflects back to the days of our now passed super experimenter, Trevor Watkins, 7DX (originally 7AA), and recounts their years of experimenting spent closely associated, how they mapped out circuits and built them up solely to see them work and how they tested equipment one with the other.

His experimenting dates back to before such things as licences were needed and he has been a member of the W.I.A. since soon after its inception, was elected a life member in 1925, and has stuck by through thick and thin. For years he was president of this division until ill health some three years ago forced a curtailment of activities, but he is now much recovered and again occupies this position which we hope he will retain for years get

Prominent among Pop's activities is his Medhurst Patent Field Telephone, which has found a very wide use in military activities and is used extensively to the present time.

A peep into his den and shack makes one's eyes open, for he has there a collection of innumerable relics of the past and without hoping to enumerate them here is a few of the articles seen: -An original Western Electric valve receiver beautifully built in stage units, each with a polished wood cabinet all "breadboard mounted, purchase price was Another receiver was an original De Forest of about the same age. (Pop says Crystal Sets in those days were priced up to £13 each.) One of Edison's original Talking Machines built up on a lyre shaped base with record drum mounted across its extremities was viewed. reproduction apparently was made through the base vibrating and passing them in turn to a horn magnifier set on the opposite end of base to the drum. Fidelity! A second Edison machine of the electric variety with automatic record changing, 5 drums being mounted around a com-

(Continued on Page 11.)

## Make the Best Job of it with

#### **EDDYSTONE COMPONENTS-British Made**



#### Dials for Accuracy & Appearance

No. 1085—An instrument type driving movement with S.M. ratio of 6:1 and vernier indicator to allow readings to within 1/10th degree. 26.

No. 1097—This is a small edition of 1077 with same high grade finish. Scale diameter is 2 3/8th-inch with machine cut markings. 10/..

Write for a completely illustrated catalogue and your local distributor's address to-

#### R. H. GUNNINGHAM & CO. (VK3ML)

94 Robinson Rd, Hawthorn, E.2 Vic. Haw. 6548

#### Contest Section

(By R. F. Cohen, VK2TF, Federal Contest Manager.)

160 METRE VK-ZL C.W. CONT EST. 1938.

This contest proved quite a success. Although conditions were not the best, the contest refuted the assumption that this band is obsolete and dead. Consistent contacts over distances up to 1,500 miles, with very simple equipment, dispelled any doubt that this band may have closed up whilst the sun spot cycle is at its maximum.

Two of the small rigs used were those of VK3ZC and ZL3CP. The former did well with a 45 T.N.T. crystal locked from an 80 metre crystal, whilst the latter used only a single F443 in a series fed Hartley circuit.

Whilst on the subject of rigs, I would like to remind you that we cannot give a resume of the rigs used unless you mention what they are. This applies particularly to the Field Day. I think in this contest every competitor is interested in how the other fellow is deriving his watts and how he is dissipating them, so a few lines about the rig with your N.F.D. log will be appreciated.

Returning to the 160 metre contest, a few competitors enjoyed this so much that they have requested two similar contests next year. This might be arranged, but at the moment we are a little short of week-ends in the winter months. Really the All Band C.W. Trophy should be run in the winter months instead of this month. This contest will have first preference for the winter in future so the possibility of fitting two 160 metre contests in seems remote. However, we will see what can be done.

Now for the results. Congratulations are extended to VKSHG, the outright winner. Neil put up a great performance in scoring 1035 points. 19 contacts in 9 districts on 160 metres is something to be proud of. Congratulations also to ZLENJ, who was second with 630 points, derived from 15 contacts in 9 districts. Detailed Results:-

	C	ontacts	Districts	Pts.
VK3HG		19	9	1035
ZL2NJ		15	9	630
VK7AB		13	8	464
ZL4CP		10	7	378
ZL3IP .		13	7	364
VK5KL		10	5	357
VK2NY		12	7	315
VK4AP		10	6	312
VK5JT		10	6	288
VK4HR		8	6	276
VK3ZC		9	7	259
VK4AW		5	4	80
VK6SA		3	3	78
ZL1LX		8	4	72
VK2VN		6	3	51
ZL3CP		6	4	44
VK6MN		3	2	38
VK3NB		1	1	7
VK3AH		1	1	7

#### U.S.A. RUNNING OUT OF CALLS.

So great has been the increase in Amateur licences in U.S.A. of recent months that W9 district has reached the end of its three letter calls and has started again at WA9.

#### THE 1939 EDDYSTONE MANUAL.

The success of the earlier Eddystone Short Wave Manuals has induced the manufacturers of these components, Messrs. Stratton Ltd.
Birmingham, to produce a new and enlarged edition. Manual No. 4 is on its way to Australia now and supplies will be available soon. We understand that this issue will carry constructional details for the most modern equipment, including cathode ray oscilloscopes, etc. The first shipment is limited in number and we suggest that you place your order with VKSML immediately for a copy, which will cost approximately 2/-

#### Amateur Radio

(Continued from page 8) mon centre, drive was from a 2 volt motor with ring type armature and designed to operate from a Bichromate Cell. Gavanometers and microphones of various shapes and sizes dating right back, the workmanship of which in most cases was noteworthy.

On the operating bench stands two T.N.T rigs, single tube Q.R.P. jobs both of them, one for 40 metres and the other 20. The old and once very popular glass rod or tube method of coil supporting is employed; an additional feature of these rigs is the grid leaks, these constitute small glass jars with platinum wire electrodes suspended in the now almost dried up electrotyte—water grid leaks I'm told.

These rigs have not called C.Q. for a long time now, but the rest of the equipment presents many vivid pictures of, and bear testimony to, their owner's past activities and one never knows when they may be given a new lease of life. Further on we see an French Barthon Ader field exchange and a two station, i.e., complete, heliograph in perfect order and other incidentals that tell of his active military career. This is not all, for Mr. Medhurst, with Mrs. Medhurst, who has now passed on,

had during their life together cona most creditable family. After readducted a happy home life and reared ing this far one could be forgiven for wondering just how with such an active commercial life, but the fact remains.

Recently as the outcome of the development of the "Radio-phone," Pop was able to converse with his aged mother in England who, though declining in health, enjoyed a talk which was most delighting, it containing, among other topics, a 91st b.rthday greeting. This must have been to him a grand climax to his own part played in, and his earlier experiences with radio.

His daughter, Miss Medhurst, conducts the old home on Beach road and stands by Pop, ruling, when necessary, with an iron hand, particularly when he sets out to overtax that ever willing active frame that seldom tires, thus he is protected from himself.

Since compiling this article news has come to hand, it is regretted to state, of the death of Mrs. Medhurst Sen. in England at the grand old age of 92 years, and I'm sure therefeelings of one and all are with Pow. A grand old mother leaves a G.O.M. of inspiring character.



The Power Equipment with a Powerful Reputation THE Organisation respons-

#### Hilco Transformers Chokes etc.

has proved its high standards for an article of extreme merit as accepted by the largest consumers in Australia.

All Products Guaranteed for twelve months.

#### Hilco Transformers Proprietary Limited

97-111 Berkeley St, Carlton N.3, Vic. Phones F 1661-2 CABLES & TELEGRAMS "HILCOY" MELBOURNE

#### 28 and 56 M.C. Notes

Ten metres has been excellent this last month with activity at its hest for DX from all continents. phones from Europe have more volume than ever heard before making contacts easy between 9 and 10.30 p.m., and on cw from as early as 7 p.m. From India VU2FZ and VII2AN are consistant cw stations. PKIVY is a new station for ten and has good quality phone, with good English! He is situated between mountains 6.000 feet high and his 175 watts to a pair of 35T's modulated by a pair of similar tubes in Class B. gives us remarkably good strength

W6LWN is yet another phone from the States who relies on the director-dipole-reflector combination Le mentioned many well known consistently heard phones who have used the following formulae for the dimensions of their beams without need of pruning for good results:a 1/10th wave refl. spacing and 15/100th wave director spacing being used. The measurements are obtained as follows:-Length of antenna dipole, 477000 over freq.: length of reflector 492000 over freq. length of director 458000 over freq. Judging by results these beams are well worth trying, especially considering their small overall size. The band is open from 6 a.m. till 2.30 p.m. for the States with all districts having good strength up till app. 11 a.m., then mostly W6-7 and VE5 till the later hour. W1ADM was contacted here at 11.15 a.m. on Cup Day with r7 phone showing the band wide open.

VK3XP and 3BD have the best contacts with Africa and can work their phones when inaudible to other VK3's. The following Europeans have been contacted by VK's in the last few weeks: -D4GXF, D3CDH, HB9DH. G2CR. ON4DI. PAOUN. C6DW. PAOKV, ON4NO. G2ZV. D4AFF. GM8MJ. G6XN. G5OV. PA0WG, G2OA, G6YL, and the old timer, G6DH, all using cw in the low freq. end of the band. G6YL has only 8 to 10 watts input, although often r8 here on cw. She has been WAC and WBE seven times and has worked 47 countries on 10. Is this emergency plus?

The most outstanding phone is PAOFR (who lives up to his call) and speaks excellent English. His rig has a single 800 in the final modulated by Class B 809's. The receiver is an Arc 175 with a reg. rf. stage to improve the signal to noise ratio. Five metres has some nice signals these days, the best here in Kew being VK3NB, who has ry phone. His CC outfit has an 80 mx xtal with 6L6 and 6L6 doublers with an 807 doubler final modulated by a pair of 6L6 tubes. The antenna has a pair of half waves in phase fed by a 500 ohm line to the stub at the centre.

1 received a very interesting letter from VK5KL who intends to keep us informed with S.A. conditions and news-many thanks, OM. The trend over there is also to CC on 5 metres and VK5ZU, 5HD, 5JT, 5KL and 5KO have the very necessary stable carriers. VK5HD used 40 xtal with a 53, a 6L6 from 20 mx to 5 mx, and 807 buffer driving a T20 final. VK5ZU has a 6A6 and 40 xtal 6L6 doub to 10 mx, 807 doub to 5 mx; 5JT also used a 40 metre rock, a 6A6 osc., then 837 and QB2/75. 5KL has a 6A6 and 40 xtal, push push doub to 10 mx and TZ20 doub to 5 mx. On the receiving side, 5JT uses an Ultra Sky-rider, 5HD a TRF. 5ZU a res. coupled uper and 5KL has a super under construction. It should not be long before that interstate qso has taken place with a line up like this in VK5. On 10 metres 5KO, 5IT, 5ZU, 5GF, 5FM, 5JS and 5Lb. also 5JT, are the most active. The most outstanding signal there is K6LCV, who puts a solid signal in every day of the year. During a contact with 5IT, PA0FB said that VK2GU's phone was r9 eany day there. 2GU has the best VK 10 mx phone into any part of the globe. W7EMP is consistently good and uses a new rotary beam, having a curtain of 4 half waves with 4 more set a 1/5th wave behind. Japan J3FJ and J2JJ have been heard calling eq on ew but no conlacts.

#### VK3MR's DX NOTES

The prediction that the out of band workers during the contest were booked has borne considerable fruit, and long and loud are the moans from the offenders! The main excuse, if it can be called so, is that the xtal was ground for the HF end of the band so it should be o.k., etc. I believe there is something in the regulations about having a calibrated frequency meter, although don't take my word for it! As mentioned many times before, the average xtal is ground plus or minus about 2kc and this figure is generally pretty right, but it must be remembered that, that is 2kc on 80 mx which, when doubling to 14mc, is 8 kc out. Added to this error creeping in, is the slightly different frequency characteristics of xtals in other holders. Don't be too hard on the Vig. Com. as their job is hard enough as it is and they are doing a good job.

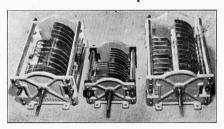
Jock, of 3FF, has broken the long silence with some interesting done

and claims to be the first VK to work VP8AD, in fact the VP8 said it was the 1st VP8. VK qso. VP8AD has been on during the month on about 14350 kc. Jock also has been amongst the choice ones like TF3C, ZB1X and CXIFO. He also had a gso with a station signing GHO who claims to be in London. Doubtful signal although he had a commercial fist. looks as if a VK pirate has been getting the boys excited by using calls like FOSAA, YJ1AA and ZK1AB. His gra seems to be in VK2 in the north. Sorry to dampen anybody's spirits! HI6Q is genuine; his qra is Capt. F. Yanes, Cuidad, Trujillo, Dominican Rep. 2DG does not consider LU.PY, etc., as rare. They are hard to work further down south Who worked VP9K who was OM! 60kc out at the HF end of 14mc! Don't count K5 and NY1 as different countries. They are the same. NY is the prefix for the naval stations in the canal zone. YS2LR seem ok and asks to gsl via W5FNX. Those looking for S. American sigs, are advised to keep on 14 mc from 3 p.m. to

(Continued on page 27.)

#### **EDDYSTONE**

Short Wave Components



#### Tasmanian Hams!

Ask for your copy of this Price List from

W. & G. Genders Pty. Ltd.

Launceston, Hobart and Burnie.

SOLE TASMANIAN AGENTS

#### Federal and Victorian QSL Bureau

(R. E. Jones, VK3RJ, QSL Manager)

Latest advises from Warragul indicate that Mac 3XZ has been busy lopping and scaling pine trees erecting new antennae, whilst Murray, 3HZ, contents himself by burning out the primaries of driver trannies.

Alan Brown, VK3CX, proud of his Was certificate, is keenly seeking verifications for the Century Club diploma. Although countries now total 130, getting the 100 verifications is a different matter.

Tubby Vale, VK3MK. recently put in a few weeks in Melbourne underinging an operation. When are you heading for Mildura again Lindsay?

Murray Orr, VK3OR, has again been bitten by the DX bug as a bunch of cards relating to 20 metre QSO's testiy.

Page 14.

Rumoured that Tom Lelliott.

VK3ZW is busying himself with relay racks preparatory to a "comeback." If the proposed job is on a parallel with that Vauxhall with the wide open exhaust and receptacle for his gloves, cane and spats, we can expect big things.

Desirous of correspondence with hams or listeners is Viti Popescu, Str. Mirea, Anghelescu No. 14; (Bellu) Bucharest, Roumania. Will trade stamps, postcards or fotos.

Cards for numerous VK3 stations are on hand at the Bureau, 23 Landale street, Box Hill, Victoria. A stamped envelope secures them promptly.

Federal Headquarters is being asked to state a case to the Postal Department for the classification of QSL Cards as commercial papers.

# EDDYSTONE SHORT WAVE COMPONENTS TRANSMITTING CONDENSERS



Cat. No. 1078. .0001 mfd., 60/-

Cat. No. 1080. 40 x 40 mfd. Split Stator, 66/-

7000V. PEAK TYPE,

AVAILABLE FROM SYDNEY'S HAM STORE

PRICE'S RADIO SERVICE 5 and 6 Angel Place, Sydney.

CATALOGUES AVAILABLE FREE.

1st DECEMBER, 1938.

#### The Amateur and Defence

A daily press report talks of a scheme to enrol amateurs in an "Australian Signal Corns Reserve": mooted as an extension of the R.A.A.F.W.R. scheme to embrace other branches of the defence services, and the Federal Government is stated to be asked to make a move in the matter. Sooner or later, with mad dogs vapping around the heels of the British Empire, something of this nature seems inevitable, but the pity of it appears to be why amateur radio in Australia has not taken the helm of inauguration of such a scheme without awaiting a move from officialdom! The press report states that the R.A.A.F. has had such a large number of applications from amateurs for enrolment in the reserve, that it has not been possible to consider them all. Hence the proposed Signal Reserve for other branches of the services. The reactions of some amateurs to any suggestion of military or naval service are worth analysation. From time to time suggestions have been made at gatherings of amateurs in Sydney that something should be done in the nature of the formation of an amateur emergency network to cover the entire country in the event of the unexpected happening. Such suggestions have invariably been made by men old enough to know the ghastly horrors of warfare and all that such shambles mean.

Recently I heard the subject broached again by an old timer amateur who started punching a key thirty odd years ago in this country and the result was the usual puerile reference to "cannon-fodder" It is noticeable that vociferous opposition to any thread of suggestion of helping to make one's own country safer in case of invasion usually comes from inexperienced youth, and more so from the type that has no noticeable telegraphic backing to support his aired opinions. Any proposal for a defence network naturally revolves around a pivot which calls for first rate efficiency in key work. It is not difficult, in case of war, to imagine what will be the status or utility of amateur phone as pictured on the dials of receivers to-day. won't be any—and the immediate cessation of ordinary amateur activities as we now know them would be a certainty. Those telegraphists who had had the good sense to take part in training schemes to familiarise themselves with service procedure in traffic handling would be of immediate and immense value to the community. The man who has lived with his mike so much that he openly admits that he is a rotten morse operator, would be in a very different category. A bank clerk with little or no radio knowledge would probabbe just as useful on joining some signal service. They would both have to be trained.

#### .VIBRATOR PACKS.

Details from VK3UK 75 Argyle Rd, Kew, E.4 Vic.

400 volts at 100 mills. 6 or 12 volts input . . £5 plus sales tax

Special Quotations for units to 600 volts 100 mills output

or from

Regent Radio Pty. Ltd.

Burke Road, Camberwell, E.6. Vic.



# **QSL** CARDS

Printed in one or two colors on White or Tinted Board.

Any design or combination of colors.—Make your QSL's express personality.

#### COMPLETE PRICES.

ONE COLOR Ink, on White or Tinted Board:—

250 12/6, plus S. tax 8d.; £0/13/2 500 15/- ... 9d.; £0/15/5 1000 22/6 ... 1/2: £1/3/8

TWO COLORS in Ink, on White or Tinted Board:—

250 18/9, plus S. tax 11d.; f0/19/8 500 22/6 ... 1/2; f1/3/8 1000 33/9 ... 1/8; f1/15/5 WE PAY POSTAGE.

Prompt, Efficient Attention.

Write, enclosing copy and remittance to—

#### ELSUM PRINTING COY.

1025-7 WHITEHORSE ROAD, E.11, MELBOURNE. Me mish to extend the Compliments of the Season to our Clients throughout Australasia.

Present a Parcel of QSL Cards to your Ham Friends at Xmas

#### Divisional Notes

To ensure insertion all copy must be in the hands of the Editor not later than the 18th of the month preceding publication.

#### N.S.W. Division

N.S.W. Notes received too late for publication.

#### (By 2IG)

Conditions in Albury were fair for the contest, but unfortunately qrm ruined things on the second week-end of the Junior. During the first week-end, VK2IG worked 20 countries in 25 contacts, but could hear practically nothing the next week-end on account of the qrm. VK2AP is still maintaining skeds in spite of difficult conditions between here and U.S.A.

2OJ—Is on occasionally, but rather busy elsewhere.

2QE—Switched his receiver on and found the tubes had blown out, so that ruined another good resolution.

2EU and 2QD—Argue about motor boats, but they're more on the water than on the air. (We'd rather be on the beer!)

2AFD—Is on leave from the Air Force (you may have heard 'em), and looks "in the pink."

2AED and 2AIB—Are on 20, getting a fair share of DX.

2AKE-Is on qrp and doing well.

2IG—Damaged an optic at work. He has been at the Eye and Ear Hospital in Melbourne, where he will have to behave for some time.

2VK—Came down with him, but is resuming his voyage to Sydney. He is sure fattening up and prattles blithley of cheap 211 tubes to make the local lads envious.

By the way, we heard PRIVY calling 2NO! What's that mean? He wouldn't work any others!

#### Victorian Division

PHONE SECTION.

#### NEWS AND NOTES.

October 25th saw the first meeting of the combined fone sections. There was a fair attendance of members of both groups, and henceforth the combination will be known as the Phone Section.

It was decided that the present chairman (W. Slevers) and secretary (J. C. Kerley) should shoulder the responsibilities of the combined groups. The November meeting of the section will be the last for this year as the last Tuesday of December falls during the Christmas holidays, therefore members please note that the next meeting is on the 31st January, 1939.

3JB.—Alas, a good 200 metre ham turns it in. Must be getting too old, Jack. Listen for him on S.W., chaps, and QSO.

3AM.—Besides 200 metres, also on 20, where he works Z's and G's with ease.

3PA—Just built new modulator. Now using plate mod. after a successful period of grid mod. Modulator is complete with Carrier Shift Indicator, Volume Level Indicator, Monitor, etc.

3JR.—Modulation tranny up in flames. No fire brigades by request.

#### Amateus Radio

Erected new beam 40ft most with ladder to the ton Rotable from the Good for drying shirts on ahook washdaw.

3HK-Has oscilloscope to monitor and check xmissions. Also used on rx. to check rec'd, stations, Beat Frequency Oscillator going and make some tests on modulation with it when time permits.

2VM-Has been on a vacation (lucky ham) up VK4 way. Active on 14. 28. 56 m.c. Using vertical & wave broadside and endfire

3KK-Very interested in methods of modulation on an 804. menting with "beams" also.

3DH-Doing some fone on 14 mc. Active also on 56 mc (56.064 and 56.104). Using a temporary semi-vertical 4 wave 20 metre ant. 27ft. high at ton and 2ft. high at bot-

Observed down Chelses way on a recent Saturday afternoon. worthy Sec apparently attempting to teach a rather easy to look at YL to handle a 16 K.W. Standard Saloon. (746 watte equals 1 HP hit)

#### U.H.E. SECTION.

(By 3JO)

#### Wangaratta Tests

At the last moment, after all tests had been completed, it was learned that the races had been abandoned and our services therefore not required. Before hearing of these tests, tentative arrangements had been made for a field day to be held in November. It was realised however that both activities would be too much of a task to undertake in the same month, so that when the Wang, tests were first motted idea of the field day was dropped.



#### **Experimenters** Operators Listeners!

#### Hallicrafters (America) SKYRIDER

COMMUNICATION RECEIVER

SKY BUDDY, 5 tubes, tunes from 16 to 550 metres; bullt-in speaker. (All models have universal Transformer, 110/250 volts A.C.)
SKY (HAMPION, 8 tubes, 7 to 550 metres, bullt-in speaker.
(HALLENGER II, 9 tubes, 7 to 550 metres, crystal filter,
RUPER SKYRIDER SY, 16, 11 tubes, 5 to 550 metres, crystal filter, separate 12in.

dynamic speaker.

SPECIAL SUPER SKYRIDER, SX17, 13 tubes, 5 to 550 metres, 2 stages pre-selection.

SPECIAL SUPER SKYRIDER, NAI7, 13 tubes, 5 to 550 metres, 2 stages pre-selection, crystal filter.

ULTRA SKYRIDER (tunes in 5 metre stations with same case as lower frequency signals), 10 metal tubes, tunes 2.5 to 52 metres, direct dial calibrations unaison to the skyrider of the skyrid

#### Kilgariff's Agencies

Box 1015 J G.P.O. Adelaide South Australia, F2490 Unfortunately, the news of the abandonment arrived too late for us to make any arrangements to supplant them, but it is likely that a field day will be held in December, prior to the holidays. A field day will definitely be arranged for a week-end in February.

#### Continuous Transmissions.

A suggestion that we should design and construct a 56 mc. cc. 100 watt transmitter for continuous C.W. operation has aroused considerable interest, but as yet it is still in the suggestion stage. More information will appear in future notes.

The competition recently conducted here has yielded only a few logs to date, and theprize, a 6V6G, is being withheld pending the arrival of more logs or new ideas about the competition. Another competition will be held in the New Year. Watch these notes for details

The next meeting is on December 20th at the W.I.A. Rooms, and all are invited to attend. In the meantime, seasonal greetings are in order once again, so here's wishing all the best.

#### EASTERN ZONE

(3PR-DG.)

Zone members are requested to get on 40 mx on Sunday mornings for the zone hook-up. Conditions seem very patchy at present, and are making the Sunday hook-ups very uninteresting as everybody cannot hear everybody else. However, chaps, stick to it, and we will soon be rewarded with better results.

3DI—Evan getty QRL, but manages to take a rx. with him. How about getting a Xmttr going too?

3HZ-Murray on 40 mx. occasion-

3QB—Jack busy building a band switching exciter using 802-6N7G and 807.

3XZ—Mac has at last finished his rack and panel job, but can't get out over the back fence. Chop down a few more pine trees, om. 3ZJ—Jim heard over 3HZ during Sunday a.m. hook-ups.

3PR—A farmer by day, talkie op. by night, and a ham in spare time, which is not very often

3XH-Stan putting out a rather decent sig. on 40 mx and 80 mx.

3GO—Graham only heard occasionally. Bel troubles keep him quiet, have to advise them to purchase decent sets. Graham.

3VG—Has not been heard on fone yet. Better hurry it up, om, and be in on the Sunday a.m. hook-ups

3SS—Keith has been very busy erecting Bcl. antennas, and usual service work keeps him engaged, hence the silence.

3DG—New modulator nearly complete, 6L6G's class AB1, so will have to now put the 809's through their paces.

We have to extend congratulations to Lindsay McGuire, of Stratford, on him getting his ticket. Has everything ready for the call to come to hand. Rig is 6L6 Tri-tet Xtal osc. and rx.2 tube Jones Super Gainer.

#### WESTERN ZONE.

#### (By VK3HG.)

VK3II—A new ham in this district and a wartime air pilot. Congratulations, Mr. Simpson, and welcome to ham radio.

VK3TW—Rebuilt his rig again and active on 7 mc. mostly. Announcing at local B class station in his spare time.

VK3JA—Operated on for appendicitis. Has his gear for sale. Mebbe the doctor won't send in a bill—then you needn't sell out. hi!

VK3XG.-On 7 and 14 mc. phone.

VK3NQ—Busy taming his QRO rig and will be on 7 mc. soon.

VK3OW—Much more active. Getting DX with lengthened V beam. Doing in a few crystals.

VK3KX .- Has 56 mc, gear going, but haven't heard of any results. First Century Club member in the Zone. Congrats. Ron!

VK3HG-DXing on 14 and 28 mc.. and has hopes of qualifying for the Century Club soon. Also losing a crystal or two.

#### NORTHERN ZONE.

#### (3ZK-3HX.)

With the advancement of the summer months, static has taken possession of the 80 mx band, while 40 mx, has been nearly as bad, probably due to the unsettled weather conditions which have been experienced in this part of the State. 20 mx. seems to be the Mecca of most of the northern gang, although conditions, particularly during the evening have not been the best; nevertheless excellent DX has been reported.

3TL-With the erection of a four section 8JK beam has, within a fortnight, worked some very nice DX, including LU, SM, SP, HP, etc.

3BM-Bruce with sundry beams has been working Europe with ease, being audible when other VK's are not.

3EP-Has now entered a period of inactivity owing to Xmas rush (hi!) Ted has been doing some fine work on 20 mx.

3WN-Working on 40 and 80 Jack has erected a new pole in his back yard, but a wind storm came along and the halyard broke. Look for a decent pole with VK3WN sign on it in the main street at Sea Lake

3CE-Is missing What's happened. Roy?

3NN-Is not heard very frequentlv. On 20 mx. Herb?

3OR-Has not been very active of late, as Murray has been busy.

3BG-What's doing, Roth? You are unusually quiet.

3TS and 3FF-Are the two 20 mx kings. Which rig is the best, boys?

3EC-Has a T20 in the final, and was building a high freq. rig. Ern is anxious to go 20 mx. Say, Ern. what do T20's cost?

3IV, ex 3EQ, ex 2AGQ-Now of Birchip. Is so far very quiet. Step on it, Keith.

3EF-Still continues to make a hole in the 40 mx. band, (Hope he fills it in when he has finished!-3RX )

3KY, of Kyabram. - Has been heard on 40 mx.

3IH-Is now 1st op. at one of the local theatres. Still active on 80 mx.

Best Brazilian

#### BRIGHT STAR RADIO -VK3UH

CRYSTALS ground from the

#### SAME DAY MAIL ORDER SERVICE TO ALL STATES.

Quartz and Tested to 50 watts input to Penthode,

Write for Free Informative

Literature.

Oscillator.

20 Metre Special . . . . . . . . . . . . . . . . £2

Plug in Dustproof Holders, 7/6 each, Satisfaction Guaranteed.

Accuracy Plus or Minus 3 Kcs.

Phone, U1218.

517 LOWER MALVERN ROAD. GLEN IRIS, S.E.6, Victoria,

#### Amateur Radia

3ZK—On 80 mx. with the same old signal, and still runs skedules with IH and HX.

3HX—Has been having a few arguments with the Doc., who tied him up in the hospital. (All right, boys, the nurses were O.K.) Still working on 80 mx, but will probably be heard on higher frequencies soon.

#### Queensland Division

The DX tests are over and the VIB gang are taking a well earned rest. The only noticeable activity is during week-ends, particularly on ten metres. 4HR, 4JP, 4RY, 4AW and 4AD all give ten a "go" on Sunday evenings, and the rivalry, although quite friendly is keen. No European or Asian station is missed for the want of calls.

The DX worked at our QRA gives some idea of what you can do on ten if your receiver is O.K., and your aerial radiating as it should. Here are the countries contacted during the last month: W. K5, VE, CT, H1, OH, J, VU, VS6, XZ, F8, PA, HB, SP, YL, ON and SM. 4HR has a huge list of countries to his credit on ten. 4RY and 4AW are also doing very well. 4JP with a rotable antenna is puttling tremendous signals into K6 and W. He has the distinction of being the first VK4 to but phone into South America—CE, YV and LU being the countries worked.

Yes, get on "ten," oms. You need a little patience, but the fun is good when conditions are favourable.

#### Personal Items.

4FB is holidaying in V.I.S. Brother Tom misses him a lot — the clocks and watches seem to pile up like unacknowledged QSL's.

4UL was one of the last to build a super, but it's a 1938 model in every way.

4GK is busy with skyline problems.

4KH is now a fully-fledged fireman. Think the next move will be a rotary beam.

4UR is very busy these days. Shouldn't be surprised if Jack's enthusiasm is now being expended in something more attractive than DX. Here's real news. 4CG is W.A.S.

4AW and 4RY spend more of their time on "ten." Think Arthur has ideas of a 28mc. nortable outfit.

It's the first in VK4's, oms.

We are indebted to 4JP for the following: The QSL manager for Northern Rhodesia is VQ2HC, Box 27, Ukana. Keep an eye on these frequencies: VQ2HC, 14,046 kc.; VQ2JC, 14,344 kc.

Congrats. on receiving the 'fone permit, 4KS.

4SA seems to be working his share of the DX.

4WA putting out very nice fone and certainly getting out well.

4HU is on 20. Think you'll like the band, om.

4TH. Cairns. Who hasn't heard the Doc on with PK6XX? Keep an eye on these Johnnies up there,Doc. The Dutch Officer hands out a good line of flattery, h!! How's medico partner, 4DN. We haven't heard a whisper from him.

4TK, Innisfail, puts an R9 sig. into VIB. Has some ideas about a rotary beam.

What about some news, 4MC?
One of our newest members is
4ZU. Don't overlook his calls.

#### South Australian Division

(By VK5KL.)

At the Transmitters' meeting last month Mr. Walker, 5WW, resigned from the chairmanship and Mr. Wreford, 5DW, was elected in his stead. On 16th November a good gathering of members visited 5KA, one of the local broadcast stations. On 11th December a picnic will be held at Sellick's Beach. Members and

friends are asked to meet at the W.I.A. Rooms at 8.30 a.m. and will proceeds from there by cars that will be available. This is definitely a social outing and all are advised to come and make a great day of it.

Results from the 5 meter holiday held on 27th November are not to hand, but will be published next month On 14 mc several chaps are striving to better each other in the race for new countries. Some with over 100 countries are 5WR. 5RX. 5JS and 5WK. Ten metres has not heen particularly good, but on Sunday, 13th November, in the evening the band was full of European DX signals. Activity is increasing on 5 metres and a few new stations have anneared 5AF in Glenelg has a good gignal from a T20 and 30 watts input 5RO of Goodwood put out a nice signal with series modulation. More co-operation is needed in the way of strictly kent schedules with interstate men to take advantage of any DX opportunities that may prevail on 5.

In this issue, as is always the custom, compliments of the season are extended to all in this wonderful game of Ham Radio.

#### WARRELD ZONE

#### (By VK5RE.)

Old man Summer is with us once again, and QRN, Summer's attendant, is also here. Conditions in this area have been definitely bad—quite the worst experienced for several months, though a few W's break through on 7 mc. at rare intervals, but, generally speaking, the ether has been as empty as a land agent's conscience.

Wakefield Zone welcomes VK5GS, a brand new station situated at Renmark, and with a very nice T9X note. Welcome, Pete, old boy, and may your adventure into the realms of Badio he hanny.

5LR—Jack still punching out a hefty sig. YF and Jack did the long trek down to Murray Bridge for the

#### 6. 12. 32. 110 VOLTS D.C. INPUT INTO A

#### KINGSLEY POWER BOX

will give you

100 WATTS, OF 230 VOLTS, 50 CYCLE A.C. OUTPUT

#### EFFICIENT ————— SIMPLE.

Think what you can do with this Power-

RUN A TRANSMITTER;

RUN A KINGSLEY HIGH-FIDELITY RECEIVER, POWER-BATTERY SUPPLY; OR HOME LIGHTING.

We Build TRANSMITTERS, COMMUNICATION RECEIVERS, AMPLIFIERS, COILS, INTERMEDIATES.

#### <u>KINGSLEY RADIO PTY. LTD.</u>

316 LITTLE COLLINS STREET, MELBOURNE. Factory: 247-251 Spring Street, Melbourne. Cent. 8461.

# VEALLS 1938 Radio Catalogue

Sixty Big Pages each 11in, x 8½in., containing thousands of items and hundreds of illustrations of Radio Sets, Parts and Accessories . . . . everything the keen radio enthusiast desires.

### NOW READY!

Write for your copy to-day, merely enclose a 2d. stamp to defray cost of postage and a copy will be sent by return mail.

AMATEUR TRANSMITTERS.—If you hold the A.O.P.C. tell us . . . it's to your advantage. We will record your name on our special list and make regular mailings to you.

# VEALLS 6 BIG STORES

Address all letters to BOX 2135T, G.P.O., MELBOURNE

DOM ZIGOT, G.I.O., MEMBOUTINE.
490 Elizabeth Street, Melbourne F3145
243 Swanston Street, Melbourne — — — — C3059
168 Swanston Street, Melbourne — — — — — C10524
299 Chapel Street, Prahran — — — — Wind. 160
3-5 Riversdale Road, Camberwell — — — W118
97-99 Puckle Street, Moonee Ponds — — — FU782

field day-and they both assure me they had a real bonzer time.

5RE—Busy cleaning up the shack (about time, too—5PN) in honour of a visit from VK5BF, of Murray Bridge.

Ron Green still interested in Radio but a recently acquired "Racing Car" has placed "Monopoly" back in its hox

Bert Stacey has recently bought a Weston multi-meter. Bert assures us that it will do everything but pay the income tax.

Harold Fisher with a brand spanking new! Say, Harold, what's the secret?

Merv. Tucker still busy with studies and high-very high-voltages.

Well, chaps, guess Xmas will be with us soon so here's taking the opportunity to wish you all a very happy and prosperous New Year, and wish very sincerely that the coming year will contain all the good things that you missed in 1938.

Cheerio and 73

Hobby.

#### GREY ZONE.

(By VK5LC)

My first attempt, chaps, since being appointed. I would like to hear from you all before the 10th of each month.

5WG—My predecessor, resigned due to family ties, so I am told, Wally!

5LG—Never hear from you since some talk of QRO. Blown the place up, Leith?

5NW—Bob seems to have got disguested with QRM on his freq., and closed down. Try E.C.

5BK—Back from holidays, but Jack's too busy at 5CK to get on the air.

5HR—Say, Bill, are you becoming a back number?

5RJ—Darce still chasing bugs in the final. Get a shot gun, Darce, or sum insecticide.

5TL—Tom, what's doing? Do you only QSO 5JT or is it DX you're working, and we don't hear you?

5MP—Len active now that the roof is on the house again. Still active on 5 mx. too.

5WJ.—Are you in this zone, Bill? Your name wasn't given to me.

5YM.—Oh, Norm! How did you manage to get on the air for skeds a week late? It was worth it to get a call from 5YL. eh?

5KJ—Is it right you are shifting to Yudnapinna, George? My! you will be able to put up plenty plurry clothes lines now!

Ex-5FB—I heard a whisper that you are organising a dinner, Frank; so you must be still over this way. What's the news?

Messrs. F. A. Trembath, L. D. Favilla and S. W. D. Wilson.—How are you going for that ticket, chaps?

Mr. Bottrall.—I know you are still trying, Col, but let's hear you have a ticket by Xmas.

5LC.—Experimenting with Veebeams, but condx very bad of late for DX. Busy season here now so have to QRT except Sundays.

Cheerio.

Les

#### BARKER ZONE

#### (By VK5GW)

Conditions have been very patchy here on the 40 mx and 20 mx bands. QRN has been the main trouble, being very heavy almost every evening.

5TW—Tom has now put up a Zepp ant., and says that reports are very much better.

5BN—Graham is back from holidays, and is on the air again. Busy building a new modulator.

5CJ—Getting F.B. reports on his fone with only 7½ watts input. Talking 5 mx rigs with 5BN.

#### Amateur Radio

5XR—Cam has been quiet lately. Busy swatting for Diesel exam, Good luck, O.M.

5PB—Still out bush. Talking of portable. Wattie says he will surprise everyone one of these days with a complete new rig—a "super job."

5GW—Heard now and again on 40 mx and 20 mx. Away from home most week-ends. Trying out various antennas. Still looking for a good all-band job.

5BF—As usual on skeds during the week-ends. F.B. fone. Recently spent a week-end at Renmark as guest of 5RE.

5BG—Haven't heard much from Bob down this way; heard plenty working him. Believe he is at present relieving at 5AD.

5YL—Still waiting for a QSO, Betty. Very seldom heard at Naracoorte. Hoping we will soon be able to hear you now that you have got away from 5MK's frequency.

Cheerio!

George

#### Western Australian Division

(By VK6WZ)

November general meeting of this Division has been postponed in same manner as last month's—except that there is no mistake this time, there being a definite reason—and therefore these notes will deal with conditions and other matters.

Every week-end seems to see new VK6 calls springing up, and that farourite stamping-ground 40 mx. gets its full share. Recent calls noted were 6EL, 6FK and 6GX. At the same time new arrivals on fone represent those who have served the necessary probation and got through and include 6GA, 6fG, 6CC and 6KW.

The November Field Day (DF Hunt) held on November 6 resulted in 6GM first and 6BW second. A total of six parties competed. The weather was reasonable, and although rain threatened, the day passed off without any falling. Some

competitors had difficulty with gear and others experienced strange (?) phenomena such as travelling away from the hidden transmitter on bearings given by their directionfinders. The event should have proved very enlightening and instructive to all.

6WI is in working order, and was on the air recently on CW on exactly 7000 kc. (marker frequency). Trouble is encountered, however, due to high local noisy level from noisy mains. Even on a "good" night there is a constant barrage of crackle from power leaks. Neon signs, etc.

6GM has been experimenting with automatic over-modulation control. and is honing to get hold of an 879. He puts out a heautiful signal, 6CP heard recently converting others to his very own special version of two half-waves in phase. Impression gained was that end-fire, broadside, all-band, hot or cold and all mod. cons. could be obtained simply by pulling the piece of string in the shack! 6EC up in metropolis now working in P.M.G. Department. Hopes to get rig going and talk back to the boys in Albany, who will no doubt be missing Eric's cheery presence. 6LJ complaining of excessive receiver hiss, and says he's sick of ham radio; will be on holidays by time this is published, and hopes to make new start after returning

6BW seen rushing here and there. Always busy, but has anyone heard Mick on the air? Suspect he spends most of his time building—so much so, in fact, that he can't find time to operate the gean he builds!

6MW keeping 20 and 10 mx aware of his presence when time and business worries permit; also heard on 40 talking to "the old folks."

6FL must be getting on and getting his share of 20 mx. DX because, although skip prevents this scribe hearing him, other stations can be heard calling.

6HT of Albany is in same position.

6RW of Wagin was also heard called recently, but is likewise in the skip for Perth.

6WL and 6AW, the country stalwarts, keep the country districts on the 40 mx, map during week-ends. Two rare signals in those of 6WG and 6ZZ were heard on a recent Sunday.

EX-6WM is said to be 5WM now. Good luck, OM, and we hope to hear you and work you often. Patience rewarded!

8YZ at last has his new m.v. rectifiers, and is on 40 and 20 once again. Having some trouble with harmonics and the second harmonic of his 7200 (and a bit) kc. rock was heard by someone in authority, and Dick received a polite note requesting him to retrain from 20 metre work outside the band! What a shock that must've heen!

6WS still without a final and essential touches to that rotary beam of his. Wishes (as many others have wished, no doubt) that it could be possible to rotate two half-waves in phase plus reflectors! Tall order, but, boy, what an antenna! Skipper will content himself with W3JK or other compact beam.

6WZ has discovered that one way of curing BCL QRM trouble is to remove the mains filter. The reverse SHOULD be the case, but isn't in this instance. Sounds like the chap whose speech amp, motor-boated until he took thedecoupling out!



(By 7YL)

The mouthly meeting of this division of the Institute was held at the Y.M.C.A. Rooms on the 8th November. As many members made a mistake about the date, owing to the public holiday, the attendance was not overflowing. The members who did arrive were rather indignant, but it just can't be helped. Members, especially councillors, are earnestly requested to observe the date printed on the notices in future.

The council held a special meeting to wade through reams of correspondence arising out of the recent convention

The recent field day, or, to be more exact, picnic, held at Blackman's Bay was a jolly function. There was quite a good gathering of hams, parents, yls and yfs present. The morning was taken up by a cricket match, then followed lunch, while the energetic male members of the contingent spent the afternoon attempting to emulate the League footballers. The minor sports of wrestling and golf were also indulged in. The weather was fine and warm, and most members of the party returned home sumburnt and yery stiff.

Upon reviewing the members of this division of the Institute, the council has found that the percentage of "ham" members is not what it used to be. This is mainly because many new amateurs who have recently obtained their tickets have



#### CRYSTALS ARE CHEAPER!

The New Diamond Saw enables me to

80mx., Low Drift .	15/-
40 mx., Thick Cut	20/-
20 mx., Thick Cut	40/-
Prices for Special 7	Types on Application

Immediate Delivery.

Maxwell Howden

13 BALWYN RD., CANTERBURY, E.7 Vic.

#### amateur Radio

not as yet joined up. To these hams we especially make an earnest plea, "Please join our division," for it is only with the wholehearted co-operation of everyone that the greatest success can be achieved. As our President said, "Unity is strength," and upon realising this we feel sure that all will make a special effort to become members, especially those in the North and on the North-West coast.

Owing to the continued inactivity in most cases, your humble servant finds news scarce.

7DH—Now working at local broadcasting station 7HT. Has not been to a meeting for ages. What about it. Dave?

7KV.—Lately suffered a bad attack of "absent-mindedness." Were the musical studies the cause, Keith?

7CK.—Was down in VIH during Show Week. Owing to numerous engagements was unable to do the rounds, but had several pleasant chin wags with old friends.

7HM—Has xmtr. just about reconstructed again. Should be breaking the ether some time next week.

7CT—Gave his little Morris Minor an airing at the field day.

7HL.—Kept the fielders busy at the cricket match; in fact, was just about unbowlable.

7AB.—Recently returned from holiday on the mainland.

7JB.—"Buck" has rebuilt his modulators and added a mixer circuit, enabling him to fade speech or music in on one another. Experiments made on 200 mx. were very successful.

7YL.—Heard muttering nasty things about equinoctial gales which caused one of the antenna masts to bite the dust.

It is with sincere regret that we record the retirement from Amateur circles of Captain A. E. T. Payne, VK3PP, one of ham radio's staunch friends and patron of the Victorian Division. Victorian members are ever mindful of the thoughtfulness of Captain Payne, whose generosity made available to this division of the Institute test equipment and meters which would otherwise have been beyond the resources of a purely amateur organisation.

(Continued from page 13) after 9 p.m. 3KX gives VP8AD's qra as R. McLaren, c/o Radio VPC Port Stanley, Falklands Is. He will qsl when he receives your card. VP6LN 14070 kc about 8.15 p.m. qra Bar-bados. Worth looking for. The W's seem to doubt the signals from VK9. but they are all o.k. Everybody seems to be talking conventions, so will be seeing you all at Colac. Listen to VK3WI transmitting on 80mx every Wednesday night, also will be down on 7mc soon. This is the last notes for the year so I wish all the best for Christmas and I wish to thank all those who have helped me by sending in notes. So 7 to all.

#### Hytron Transmitting Tubes

Obtainable only from

#### P. & L. WIRELESS SUPPLIES

PTY. LTD. TELEPHONE: F4823. 213 ELIZABETH STREET, MELBOURNE.

#### Give your Transmitter

#### ... a Christmas Box!

Many a transmitter is struggling along with an old power transformer and making the best of a bad job. We have seen a lot of these old-timers in different shacks we have visited. Most of them grunt loudly every time the key is pressed—waste more energy in the form of heat than ever reaches the filter—and have such poor regulation that the class C stage is never on the same frequency for more than two dots during a oso!

We have a special HT Power Transformer which, used with our type TZ7 input choke, will give 600 volts of DC at 200 ma. from the usual mercury vapour rectfer. Besides being of good appearance and giving superlative performance, the price is right.

Why not give your transmitter a chance to show what it can really do? A qsl card to us will bring details and delivery can be made the same day if required.

You'll have a Merry Xmas rebuilding with Trimax Transformers—and to all our customers and friends we would like to take this opportunity of saying "More Power to you—and a Happy New Year."

HARRY CLIFF VK3HC.

RUPERT PETERSON VK3PT.

MANUFACTURED BY

#### TRIMAX TRANSFORMERS (A DIVISION OF CLIFF & BUNTING PTY. LTD.)

29-35 FLEMINGTON ROAD, NORTH MELBOURNE.
PHONES—F1846, F2550.

#### Hamads

Advertising space in these col-umns is available to those wishing to sell, buy or exchange, at \$d, per to sell, buy or exchange, at \$d, per the line. Minimum charge, 1/-, To ensure insertion enclose postal note or stamps with copy, and ad-dress to the Advertising Manager, "Amateur Radio," White Riorse Road, Box Rill, Ed.1., victoria.

mx Xtal 7080kc., £1: 242A Tube (guaranteed), £1; 3.4 mfd. 1000v. (wkg), Condensers, £1 5/-: 0-2 Thermo Ammeter (highest grade), 0-50 Weston Milliameter, £2/5/-; Transformers, 650-0-650v. (150 ma), 475-0-475v. (150 ma.), Filter Chokes ot match. £1/10/-. Apply VK2OH. Genuine bargains. Phone FX6520, Randwick,

BRIGHT STAR RADIO, VK3UH, 517 Lower Malvern Rd., Glen !ris,

SES

Crystals ground from best Brazilian quartz and tested to 50 watts input to penthode oscillator, as used by leading experimenters and DX stations throughout Australia; accuracy plus or minus 3 KC's.

160 metre x or v cut, 15/-. 80 metre x cut, 10/-. 80 metre v cut zero drift, 10/-. 40 metre x cut, 15/-. 40 metre v cut zero drift. £1/5/, 465 Kc xtal gates, £2. Crystal blanks, prices on application. Receivers and transmitters structed. Taylor transmitting tubes at special low prices; the following types are stocked:-T20, 24/-; T40. T55, £3/5/-: 866. 17/6. Arriving shortly, the new Taylor low power beam tube, the T21; order yours now and avoid disappointprice approximately Power transformers at lowest prices, constructed to specifications. Typical specification and price, 1,000 volts aside the centre tap at 200 milliamps tapped at 500, 750, 1,000 volts, guaranteed 12 months, price £2/10/-.

Variable Frequency Unit Special

Holder and Crystal, 30/-. Call or write above address.

Phone U1218. Satisfaction guaranteed.

CHASSIS COVERS in sprayed steel or aluminium, also Relay Racks built to specifications. Transmitter Name Plates in Ivorine. Brass or Chromium Plated. Phone B5056. Write or call to CHAS. HANDFORD, 13-15 Mary st., BRISBANE.

ONE Roller-Smith 3in. 250 M/A Meter, £1/5/-. 2 Jewell 3-in. 150 M/A Meter, £1, 1 Hickock 3-in. 100 M/A Meter, £1, 1 Jewell 3-in. 1,500 Volt D.C. Meter and Shunt, £2. Jewell 3-in. 15 Volt A.C. Volt-meter, £1/10/-. 1 Weston 2-in. 50 M/A Meter, £1. 1 Weston 2-in. 10 M/A Meter, £1. 1 Weston 5 M/A 1 Weston 100 Meter, £1. 1 Weston 100 M/A Meter, £1. 59 Valves, 7/6 each. 1-203A Valve and 50 Watt Socket. £3/10/-. 1-845 Valve and 50 Watt Socket, £3/10/-. 1—6P6 Valve (new), 7/6. 1 Power Transformer 380 aside 120 M/A 2-2.5 v Filament Windings 1-5 Volt, 10/-. 1 Power Transformer, 650 aside, 120 M/A, £2. 1 Modulation Choke (Heavy Duty), 10/-. 1 Filament Transformer, 2-10 Volt 5 Amp Widings, 10/-: 5 Acme Celluloid Encased Variable Condensers, .00025 and .0005 mrd., 5/- each. 6 30 Henry 100 M/A Filter Chokes, 7/6 each. General Radio Filament Transformer 2-3.5--5 and 7.5 Volt Windings, 7/6. 1 7.5 Volt 10 Amp. Filament Transformer, 7/6. 8mfd 500 and 600 P.V. Wet Condensers, 2/each. Stand off Insulators (Bakelite), Medium, 6d, each, 3 Power Transformers, 400 V aside 2.5 and 5 Volt Filaments, 5/- each. 523 and 83 Rectifier Valves, 7/6 each. I Power Transformer 440 V aside 120 M/A 3-2.5 and 1-5 volt Filament Winding, 15/-. 1 Rola 10-in. Permagnetic Speaker 7,000 Ohms Output, 20/-. 1 Philips "B" Eliminator and Valve, 10/-. 2 Philips Filament Transformers 1-4 volt and 1-1.5 and 2.5 volt, 5/- each. Lots of other gear cheap. Write or call VK3JB, J. R. Kling, 41 Myrtle Road, Hampton,

..... WANTED to Exchange. Brand new 20 watt Modulating Tube (Phillips M.C. 1/50) for bug key. 3TE. L. S. Dixon, 15 Callantina road, Hawthorn. 

VTALS by W9ADN, AT cuts, 3.5 mc, 20/-; 7 mc., 22/6; 14 mc. and filters, prices on application; MOUNTS. American, 8/6; R.F. CHOKES, 10/200 mx., 200 ma, 2/6; 10/200 mx. 500 ma, 5/-, 5 mx, 1/9; BUGS, 50 in use in Telegraph Branch, Melbourne, 35/-, plus postage; KEYS, P.O. Pattern, 14/6, plus postage. VK3RJ, 23 Landale street, Box Hill, Vic.

## Radiotron 902

2-inch Cathode Tube

This new release provides at a reasonable price the ideal means for checking modulation and waveform. The 902 requires only 400-600 volts supply and the deflection sensitivity is high.

#### Special Features

Octal base (same connections as 913).

Medium Persistence Screen.

Electrostatic deflection

Maximum diameter 2.1%".

Maximum overall length 7%".

Price £2/15/- nett

# RADIOTRONS

The World's Standard Valves

